## STIC-Biotech/ChemLib

From:

Yu, Misook

Sent:

Tuesday, March 22, 2005 11:07 AM STIC-Biotech/ChemLib 09/830,338

To:

Subject:

Pls do interference search of SEQ ID NO:1.

Examiner Misook Yu, Ph.D. 571-272-0839 (Phone) Art Unit 1642 REM-3A18 (Room) REM-3C18 (Mail Box)

STAFF USE ONLY
Searcher:
Searcher Phone: 2-
Date Searcher Picked up:
Date Completed:
Searcher Prep/Rev. Time:
Online Time:

Type of Search										
NA#:	AA#:									
Interference	: SPDI:									
	Oligomer:									
Encode/Tran	nsl:									
Structure#:	Text:									
oventor:	Litigation:									

******
Vendors and cost where applicable
STN:
DIALOG:
QUESTEL/ORBIT:
LEXIS/NEXIS:
SEQUENCE SYSTEM:
WWW/Internet:
Other(Specify):

This Page Blank (uspto)

```
(without alignments)
3878.987 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Al
Sequence 2, Al
Sequence 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Sequence
                                                                                                                                                                                                                   7308
1 MATQQKASDERISQFDHNLL.....SKYLTILQKWILPFSPIIQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                March 26, 2005, 09:08:03; Search time 27 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptodata/1/iaa/Sh_COMB.pep:*
/cgn2_6/ptodata/1/iaa/SB_COMB.pep:*
/cgn2_6/ptodata/1/iaa/Gh_COMB.pep:*
/cgn2_6/ptodata/1/iaa/BCTUS.COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS.COMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -09-069-023-29
                                                                                                                                                                                                                                                                                                                                      513545 seqs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                              - protein search, using sw model
                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Issued Patents AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match Length DB
                                                                                                                                                                                                 US-09-830-338-1
                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                              OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Result
No.
```

	PROTEIN	0;	09	120	180	240	300	360
42, Appl 12, Appl 11, Appl 10,	PROT	œ	ωω			нн		
41111111111111111111111111111111111111	THE	Gap	0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	SDHK	SISP SISP	н—н	34 — S	redi 
		03;			\$=\$ -\$	SKKSSEEI          SKKSSEEI	SAV 	AEV AEV
sequence Seq	ENCODING	14	<u>8</u> —8	51 15 11 15 11 15	NWP H MP	RSKK 	WPRE WPRE	MKSS    MKSS
3 3 3 3 3 4 5 5 5 5		Length Indels	ERA ERA	FGA FGA FGA	SFR 		<u>8</u> —8	2-5 2-6
	GENE	Lengt	matookasderisopphnlipelsaligidavolakelebeegkerakmokgynsomrsi 	AKBLKTFVFYEPYSSWIPQEWAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF 	HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKWRYQEBEARLASFRNWPFYVQGISPCV 	LSBAGFVFTGKQDTVQCFSCGGCLGNWEBGDDPWKEHAKWFPKCFFLR:	QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA 	KAGLFYTGIKDIVQCFSCGGCLEKWOEGDDFLDDHTRCFPNCPFLQNMKSSAEVTFDLQS
1 78		4 ,	BLEE   BLEE	5-5 -5-5 -5-5	OEEE OEEE	HAKW HAKW	YEEL 	RCFP 
41144117411777777777777777777777777777	ROTE	EC	Z=Z	0-0	ARY MRY	WKE	SIFA 	THOC THOC
00000000000000000000000000000000000000	Σ : 2 14 Σ : 2	core 7308; red. No. 0; Mismatches	DAV DAV	\$ = \$ \$ \$	20—20 20—20 20—20			
2012- 2121- 2121- 22111- 22111- 22111- 6711- 6672- 6672- 6989- 6989-	GNMENT ITORY E 5,872 7	e 73 . No smat		FYFT 	KSRI      	NWEE NWEE	ASAY 	OEGD 
- 600 - 600	ALI 72 72 853 9/70 7,79	Score Pred.	LSA 	AAG		2 	LPM LPM	EKE EKE EKE
US-09-201-932-42 US-09-212-971-12 US-08-617-053A-12 US-09-617-053A-12 US-09-617-053A-10 US-09-617-053A-10 US-09-617-053A-10 US-09-617-053A-10 US-09-617-053A-10 US-09-617-053A-10 US-09-617-053A-10 US-09-617-053A-10 US-09-619-1056-4 US-09-69-36-4 US-09-69-4 US-09-	0587 THI 7/006 1/235/09	o o		OEM OEM	DIR DIR	80GC	VOR:	00000 00000000000000000000000000000000
क्षणंष्र प्रताम का	//097 O O O O O O O O O O O O O O O O O O O		NHO?	AIMS	AKA HEKA	\$ <u>_</u> \$	WSW.	CFSC 
0000 4 4 4 4 4 4 4 6 000 000 000 000 000	ALIGNMENTS 5-872-1 ce 1, Application US/09705872 No. 6617429 No. 6617429 CANT: JOh-E IKEDA CANT: Kenji YAMAMOTO CONTINENTION: APPOPTOSIS INHIBITORY PROTEIN, OF INVENTION: AND CDNA THEREOF REFERENCE: 2000-1110/LC/00653 NT APPLICATION NUMBER: US/09/705,872 NT APPLICATION NUMBER: US/09/705,872 NT FILING DATE: 2000-11-06 APPLICATION NUMBER: 1999-01-29 REIS PATH 1403 NO 1 NISM: HOMO SAPIENS HOW SEQ ID NOS: 8 ARE: PATH 1403 HOW SAPIENS	tch al Similarity 100 1403; Conservative	12 S2	EPYS:	NG CON	8—8 1—8 1—8	BHF BHF	Ø_Ø
	cation  cation  if YAMA  if YA	ty erve	SDEI			# 	10 11 11 11 11	PI-G
	lica 429 429 hb.E TION TION TION ATIC OATIC	lari Cone	8=8 8=8		CGFL	AGEV 	KGFV KGFV	LFYT
N N N N N N N N N N N N N N N O O O N	-1 App 647P Jo Norah Norah NG D Norah NG D Pat (403 Hom Hom -1	Simi 3;	A — A	AKE EKE	HPD 	LSE LSE	08Y 	X — XX
441.5 440.0	- 872. No. 1, No. 1, INFC ANT: ANT: PILIN FI FILIN FILIN FILIN FILIN FILIN FILIN FILIN FILIN FILIN FILIN FIN	Match local (		61	121	181	241	301
	1 LLIRAN LLII LLII LLII LLII LLII LLII LLII LL	y Matc Local hes 14						
20000000000000000000000000000000000000		Que Bes Mat						
	A U U U U U U U U U U U U U U U U U U U		8 8	දි දි	В &	\$ A	රු පු	& 8
	•							

Sequence Sequence Sequence

4457.5 457.5 457.5 457.5 441.5 441.5

Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Sequence

PCT-US96-12860-2

Sequence

Sequence

g

8. &

8 6 8 6

8 8

6 B 6

유 장 유 8 6

8 8 6 8 6

요 요

ብ አ

음 상 음 品 公 品 谷

```
Sequence 3, Application US/09705872

Batent No. 6617429

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: JOH-E IKEDA
APPLICANT: Kenji XAMAMOTO
TITLE OF INVENTION: ADOPTOSIS INHIBITORY PROTEIN, GENE ENCODING THE PROTEIN
TITLE OF INVENTION: WOUNDER: US/09/705,872
CURRENT FILING DATE: 2000-111-06
PRIOR APPLICATION NUMBER: 09/29,797
PRIOR APPLICATION NUMBER: 09/29,797
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEGKERAKWQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AKRLKTFVTYEPYSSWI PQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSEAGPVFTGKODTVQCFSCGGCLGNWEBGDDPWKEHAKWFPKCEFLRSKKSSEEITQYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDFLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNINEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLDISSDLATDHLIGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KKIAFLWASGCCPLINRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QLKNOVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601 AFPFYNTVCILRKLFSHNMTRLRKFMYYFGKNÓSLÓKTÓKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FDDVAVFKSYMERLSLRNKATAETLKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKWRYQEEEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKMRYQEEEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNOSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         .
                                                                                                                                                                                                                                                                                                                                                                                                     Length 1295;
                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                       4,
                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     Score 6691;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                     91.6%;
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 99.8
Matches 1282; Conservative
                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                1295
RESULT 2
US-09-705-872-3
                                                                                                                                                                                                                                                                                                                                                                   US-09-705-872-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961 ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVFVA 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1141 EYDPSKLVKLIQNSPNLHVPHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVA 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1261 QLHCLRVLSFFKTLNDDSVVEIAKVALSGGFQKLENLKLSINHKITEEGYRNFFQALDNM 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1321 PNLQELDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKER 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLE 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SLPNFISLKILNLEGQQFPDEETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQ 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1201 SLPNFISLKILNLEGQQFPDEETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQ 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
 420
                                  420
                                                                        480
                                                                                                          480
                                                                                                                                              540
                                                                                                                                                                   481 KKIAFLWASGCCPLINRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ 540
                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                                                                                                                                                                 999
                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901 QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKKGQVPTIDQDYASAFEPMNEW 960
                    361 RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                             LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                    QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
                                                                                                                                                                                                                                         541 QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
                                                                                                                                                                                                                                                                                                                AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                 FDDVAVFKSYMERLSLRNKATARILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                        FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDLIMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841 MQLLRGLWQICPQAYFSWVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA
                                                                        LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                            KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                             APPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                           EDLIMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSOVPTIDODYASAFEPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QLHCLRVLSFFKTLNDDSVVEIAKVAISGGFQKLENLKLSINHKITEEGYRNFFQALDNM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PNLOELDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HPOSKYLTILOKWILPFSPIIOK 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HPQSKYLTILQKWILPFSPIIQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                        421
                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1381
                                                                                                                                            481
                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    961
```

,

8 &

\$ 8 &

8 8 8 8

ያ ያ

ያ የ

6 B 셤 ò g

```
1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLBIL 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                    180
                                                                                                                                240
                         120
                                                                            180
                                                                                                                                                        240
                                                                                                                                                                                 300
                                                                                                                                                                                                           300
                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL 900
 9
                                                                                                                                                                                                QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
                                                                                                                                                                                                                                                                                                                                                                                             KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                        AKRLKTFVTYEDYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLDIEDHKRF
                                                                                        KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDFLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                                                                                                                          QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
                                      61 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                         QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
                                                                                                                                                                                                                                                                                                       RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNINEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ
                                                                                                                                                                                                                                     KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                        RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                           LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                          FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDLIMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDLIMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MQLLRGLWQ1CPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERNIAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MTVFSASORIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAROELLLTLPSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MTVFSASQRIELHINHSRGFIESIRPALELSKASVTKCSISKIELSAAEQELLLTLPSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA
                                                                            HPDCGFLLNKDVGN1AKYD1RVKNLKSRLRGGKMRYQEBEARLASFRNWPFYVQG1SPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA
                         61
                                                                            121
                                                                                                                              181
                                                                                                                                                       181
                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1081
                                                                                                                                                                                 241
                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901
                   ò
                                             원 상
                                                                                           g
                                                                                                                             6 B 6
                                                                                                                                                                                                   8 8 8 8
                                                                                                                                                                                                                                                                                                       8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08836134A

Sequence 2, Application US/08836134A

Patent No. 6020127

GENERAL INFORMATION:

APPLICANT: Mackenzie, Alex B.

APPLICANT: Mackenzie, Robert G.

APPLICANT: Mackenzie, Michael

APPLICANT: McLean, Michael

APPLICANT: McLean, Michael

APPLICANT: McLean, Michael

APPLICANT: Nouronal Apoptosis Inhibitor Protein, Gene Sequence and TITLE OF INVENTION: Neuronal Apoptosis Inhibitor Protein, Gene Sequence and TITLE OF INVENTION: Mutations Causative of Spinal Muscular Atrophy

FILE REPERRINGE: 3477-112, 033477/139914

CURRENT FILING DATE: 1997-06-20

CURRENT FILING DATE: 1997-06-20

NUMBER OF SEQ ID NOS: 23

SEQ ID NOS: 23

SEQ ID NOS: 23

SEQ ID NOS: 23

SEQ ID NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                 1200
                                                                                                                                                                                                                      ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                   1080
                                                                                                                                                                                                                                                                                       MIVFSASQRIELHIANHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLITIPSLE 1080
                                                                                                                                                                                                                                                                                                                            SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPREFPNFHHMEKLLIQISA 1140
                                                                                                                                                                                                                                                                                                                                           SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1260
                                                                                                                                                                                                                                                                                                                                                                                                                                  SLPNFISLKIINLEGQQFPDBETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQ 1260
                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                   780
                                                              840
                                                                        900
                                                                                                                                                                     960
                                                                                                                                                                                 9
        PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPRISLQ
                                                                                                                                                                                                                                                                       MIVPSASQRIBLHLANHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLILPSLE
                                                                                                                                                                                                                                                                                                                                                                                EYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVA
                                                                                                                                                                                                                                                                                                                                                                                               QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MATQQKASDERISQFDHNILPELSALIGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 6373.5;
Pred. No. 0;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 95.9
Matches 1229; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
US-08-836-134-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-836-134-2
                                721
                                                                                    781
                                                                                                                                         841
                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                            1081
                                                                                                                                                                                                                                                                                                                                                      1081
                                                                                                                                                                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1261
                                                            781
                                                                                                              841
                                                                                                                                                                  901
                                                                                                                                                                                                                      961
          721
```

6 6 6 6 6

us-09-830-338-1.rai

QY         421 LLDISSDLATDHILGCDLSIASKHISKPVQEPIVLPEVFGNLNSVMCVEGEAGSGKTVLL 480	Qy 481 KKIAFLWASGCCPLIARPQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ 540	Qy 541 QLKNQVLPLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK 600 	Qy 601 APPFYNTVCILRKLFSHNWTRLRKFWYYFGKNQSLQKIQKTPLFVAAICAHWEQYPFDPS 660 	Qy 661 FDDVAVFKSYMERLSLENKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED 720 	QY 721 EDLTMCLMSKFTAQRLRPFYRFLSPAFOBFLAGMRLIELLDSDRQEHODLGLYHLKQINS 780 	CY 781 PMATVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLYDDNESLENISENDDYLKHQPEISLQ 840 Db 781 PMATVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ 840	QY 841 MQLLRGLWQICPQAYFSNVSBHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL 900 	OY 901 QYFEDHPESLSLIRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDODYASAFEPMNEW 960	QY 961 ERNLAEKEDNVKSYMDMORRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020	QY 1021 MTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLE 1080 	QY 1081 SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEBFPNFHHMEKLLIQISA 1140	OY 1141 EYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVA 1200	SEK    SEK	Qy 1261 QLHCLRVLSFFKTLNDDSVVBI 1282 	RESULT 5 US-08-836-134-23 ; Sequence 23, Application US/08836134A ; Patent No. 6020127	GENERAL INFORMATION:  APPLICANT: MACKERIE, Alex E.  APPLICANT: Korneluk, Robert G.  APPLICANT: Mahadevan, Mani S.	
120	VA 114 	1150 ŚLPNFIŚLKIINLEGĞQFPDEGTSEKFAYILGSLSNLEBLILPTGDGIYRVAKLIIQQCQ 1209 1261 QLHCLRVLSFFKTLNDDSVVBI 1282	1210 ÇIHCLRVİSFFKTLNDDSVVEİ 1231 LT 4	09-493-784-2 equence 2, Application US/09493784 atent No. 6429011 SNERAL INFORMATION:	APPLICANT: Mackenzie, Alex E. APPLICANT: Korneluk, Robert G. APPLICANT: Mahadevan, Mani S. APPLICANT: McLean, Michael	hik	TITLE OF INVENTION: Mutations Causative of Spinal Muscular Atrophy FILE REFERENCE: 3477-112, 033477/139914 CURRENT APPLICATION NUMBER: US/09/493,784 CURRENT FILING DATE: 2000-01-28	PRIOR APPLICATION NUMBER: 08/836,134 PRIOR FILING DATE: 1997-06-20 NUMBER OF SEQ ID NOS: 23.0	EQ ID NO 2 LENGTH: 1232 YPP: NOW SADIENS	87.2%; Score 6373.5; DB 4; Length 1232;	nes 1229; Conservative 1; Mismatches 1; Indels 51; Gaps 1 MATQQKASDERISQFDHNLLEELSALLGLDAVQLAKELEEEEQKERAKWQKGYNSQWRSE	MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEBEBEQKERAKWQKGYNSQMKSE AKRLKTFVTVEPYSSWIPQEMAAAGFVFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF 	61 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLIKLFIEDHKKF 120 121 HPDCGFLINKDVGNIAKYDIRVKNIKSRLRGGKWRYQEEARLASFRNWFFYVGGISPCV 180 121 HDDCGFLIAKDVGNIAKYDIRVKNIKSRIAGAKWRYQEEARLASFRNWFFYVGGISPCV 180 121 HDDCGFLIAKDVGNIAKYDIRVKNIKSRIAGAKWRYOFFRANFFYVGGISPCV 180		241 QSYKGFVDITGEHFVNSWVQRELPWASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA 300 	PDLQS 36	361 RGELCELLETTSESNLEDSTAVGPIVPEMAQGEAOWFQEAKKINEQLRAATTSASFRHMS 420 

960

900 606 1089

```
ERNIAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1029
                                                                                                                                                                                             MTVFSASQRIBLHLNHSRGFIBSIRPALBLSKASVTKCSISKLBLSAABQBLLLTLPSLB 1080
                                                                                                                                                                                                                                                         SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMBKLLIQISA 1140
                                                                                                                                                                                                                                                                           SLEVSGTIQSQDQ1FPNLDKFLCLKELSVDLEGNINVFSV1PEEFPNFHFMEKLLIQISA 1149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: MacKenzie, Alex B.
APPLICANT: MacKenzie, Robert G.
APPLICANT: MacKenzie, Robert G.
APPLICANT: MacHedwan, Mani S.
APPLICANT: McLean, Michael
APPLICANT: McLean, Michael
APPLICANT: Roy, Natalie
APPLICANT: Roy, Natalie
APPLICANT: Ikeda, Joh-e
TITLE OF INVENTION: Mutations Causative of Spinal Muscular Atrophy
FILE REFERENCE: 3477-112, 033477/139914
CURRENT APPLICATION NUMBER: US/09/493,784
CURRENT FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: 08/836,134
PRIOR PILING DATE: 1997-06-20
NUMBER OF SEQ ID NOS: 23
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 23
LENGTH: 1151
TYPE: PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLFIEDHKRF 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYBELRLDSFKDWPRESAVGVAALA 300
                     850 MQLIRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL
                                                                                  910 QYFFDHPESLSLLRSIHFSIRGNKTSPRAHFSVLETCFDKSGVPTIDQDYASAFEPMNEW
                                                                                                                                ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKI PCLEVDVNDI DVVGQDMLEIL
                                                                                                                                                                                                               1030 MTVPSASQRIELHLMHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190 LSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEEITQYI
                                                                 QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10 MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MATOOKASDERISOFDHNLLPELSALLGLDAVOLAKELEEBEQKERAKMOKGYNSOMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HPDCGFLLNKDVGN1AKYD1RVKNLKSRLRGGKMRYQEEEARLASFRNWPFYVQG1SPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEEITQYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Score 5955; DE; Pred. No. 0; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 23, Application US/09493784; Patent No. 6429011; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81.5%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 99.8 Matches 1139; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens
US-09-493-784-23
                                                                                                                                                                                                                                                                                                                       E 1141
                                                                                                                                                                                                                                                                                                                                                       E 1150
                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-493-784-23
                                                                901
                                                                                                                                                                                             1021
                                                                                                                                                                                                                                                         1081
                                                                                                                                                                                                                                                                                        1090
                                                                                                                                                                                                                                                                                                                                                       1150
                                                                                                                              961
                                                                                                                                                              970
                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                            ద
                                                                ઠે
                                                                                       g
                                                                                                                      ર્જ
                                                                                                                                                       셤
                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     549
                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                       70 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF 129
                                                                                                                                                                                                                                                                                                                                                                                                                     130 HPDCGFLLINKDVGNIAKYDIRVKONLKSRLRGGKMRYQEEEARLASFRNWPFYVQCISPCV 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYBELRLDSFKDWPRESAVGVAALA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTWRARDIRRYLETILEIK 600
                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                        10 MATQQKASDERISQFDHNLLPELSALIGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                    61 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OSYKGFVDITGEHFVNSWVORELPMASAYCNDSIFAYBELRLDSFKOWPRESAVGVAALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLMEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPFYNTVCILRKLFSHNMTRLRKFMYYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKWRYQEEEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSEAGFVFTGKQDTVQCPSCGGCLGNWEBGDDPWKEHAKWPPKCEFLRSKKSSEEITQYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PDDVAVFKSYMERLSLRNKATABILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                       MATQQKASDER I SQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                           Gaps
Patent No. 6020127
TITLE OF INVENTION: Mutations Causative of Spinal Muscular Atrophy FILE REFERENCE: 3477-112, 033477/139914
CURRENT APPLICATION NUMBER: US/08/836,134A
CURRENT PILING DATE: 1997-06-20
NUMBER OF SEQ ID NOS: 2.0
                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                          Length 1151;
                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                            ä
                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                        1; Mismatches
                                                                                                                                                                                                          Score 5955;
Pred. No. 0;
                                                                                                                                                                                                          81.5%;
99.8%;
                                                                                                                                                                                                       Query Match
Best Local Similarity 99.8
Matches 1139; Conservative
                                                                                                                           LENGTH: 1151
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                        US-08-836-134-23
                                                                                                            SEQ ID NO 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190
                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                      े
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

and

ö

120

69

180

249

```
-----RGGKWRY--QEEEARLASFRNWPFYVQG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  256 TLRFSIS-------NLSMQT-----HAARMRTFMYWPSSVPVQ 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PDLOSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----ATDHLLGCDLSIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          346 DEIQGRYPHILEQILSTSDTIGEEN--ADPPIHFGPGESS-SEDAVMMYTPVVKSALEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | : : : | | : : : | | EDWINSNKOKMKYDFSCE-----LYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176 ISPCVLSEAGFVFTGKODTVQCFSCGCCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38 LEEEEQKERAKMOKGYNSOMRSEAKRIKTFVTYEPYSSWIP---OEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93; Mismatches 238; Indels
                                                                                                                                                                                                                    CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE: 04-AUG-1995

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Clark, Paul T.

REGISTRENCE/DOCKET NUMBER: 30,162

REFERENCE/DOCKET NUMBER: 30,162

REFERENCE/DOCKET NUMBER: 30,162

REFERENCE/DOCKET NUMBER: 30,162

TELEPAX: 617/542-5070

TELEPAX: 617/542-8906

INFORMATION FOR SEQ ID NO: 8:

SEQUENCE CHARACTERISTICS:

LENGTH: 618 amino acids
   PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.3%; Score 462; DB 2; 24.7%; Pred. No. 5.9e-33;
                                                                              CITY: Boston
STATE: MA
COUNTRY: DSA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                     Richardson
                 NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS.
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : 618 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 24.7<sup>1</sup>
Matches 159; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: both
MOLECULE TYPE: protein
 INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-511-485-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            415
   TITE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1090 SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA 1149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1021 MTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLE 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          849
                     309
                                                       360
                                                                                       369
                                                                                                                         420
                                                                                                                                                         429
                                                                                                                                                                                            480
                                                                                                                                                                                                                             489
                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                    490 KKIAFLWASGCCPLINRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ 549
                                                                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                  699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                850 MQLIRGLWQICPQAYFSMVSEHILVLALKTAYQSNTVAACSPFVLQFLQGRTLIFIGALNL 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       910 QYFFDHPESLSLLKSIHFSIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW 969
                                                                                                                                                                                                                                                                                                                                QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK 600
610 AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       790 PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLIHLVDNKESLENISENDDYLKHQPEISLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    970 ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1030 MTVPSASQRIELHINNSRGFIESIRPALELSKASVTKCSISKLELSAAAEQELLITLPSLE
                                                                                     310 KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                       370 RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                             KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                  APPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDLIMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        730 EDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLLRGLWOICPOAYFSMVSEHLLVLALKTAYOSNTVAACSPFVLOFLOGRTLTLGALNL
                                                                                                                         RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                            LLDI SSDLATDHLLGCDLS IASKHI SKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 8, Application US/08511485
Partent No. 5919912
GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
APPLICANT: MacKenaie, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Alexander E.
APPLICANT: MacKenaie, Alexander E.
APPLICANT: MacKenaie, PRIMERS, TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          È 1150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-511-485-8; Sequence 8, Ap.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    670
                                                                                                                                                                                                                           430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                     250
                                                     301
                                                                                                                         361
                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                           421
                     유
                                                     ò
                                                                                   셤
                                                                                                                         ò
                                                                                                                                                  a
                                                                                                                                                                                         ò
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
```

24;

Gaps

154;

80 94

KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG----- 490

443

엄

```
TITLE OF INVENTION: DETECTION AND MODULATION OF TITLE OF INVENTION: DAPS AND NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                     491 ----CCPLLNRFQLVFYLSLSSTR----PDEGLASIICDQLLEK--EGSVTEMCMRNII 539
                                                                                                                                                                                                                                                523 IFKNC----LKEIDSTLYKNLFVDKNMKYIPTEDVSGLSLEEQLRRLGEERTCKVCMDKEV 579
                                                         | : : | | | : : | | | 403 GFNRDLVKQTVLSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKGAEEMASDDLSLIR 462
                                                                                                                                                                   463 KARMALFOOLTCVLPILDNILKANVINKOEHDIIKOKTOIPLOARELIDTIWVKGNAAAN 522
                           -ATDHLLGCDLSIAS 442
                                                                                                                       443 KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 618;
                                                                                                                                                                                                                                                                                                                                                 580 ----SUVFIPCGHLVVC---QECAPSLRKCPICRGIIKGTVRT 615
                                                                                                                                                                                                                                                                                                                 540 QQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.3%; Score 462; DB 3; 24.7%; Pred. No. 5.9e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTENCY
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/800,929A
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07891/009001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIPICATION: 424
PRIOR APPLICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bieker-Brady, Kristina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 8, Application US/08800929A
Patent No. 6133437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : Korneluk, Robert G
: MacKenzie, Alexander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS: Clark & Elbing LLP
STREET: 176 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Korneluk, Robert G
APPLICANT: MacKenzie, Alexander
APPLICANT: Liston, Peter
APPLICANT: Baird, Stephen
APPLICANT: Tsang, Benjamin K
APPLICANT: Prang, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 07
REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-428-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 8 SEQUENCE CHARACTERISTICS: LENGTH: 618 amino acidd TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 617-428-7045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino a STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Bost
STATE: MA
                           415 SF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-800-929A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-800-929A-8
                                                                   g
                                                                                                                    Š
                                                                                                                                                         셤
                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                               쉱
                                                                                                                                                                                                                                                                                                                 ò
463 KNRMALFQQLTCVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELIDTIWVKGNAAAN 522
                                               ----CCPLINRFQLVFYLSLSSTR-----PDEGLASIICDQLLEK--EGSVTEMCMRNII 539
                                                                          523 IFKNC----LKEIDSTLYKNLFYDKNMKYIPTEDVSGLSLEEGLRRLQEERTCKVCMDKEV 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         141 PTLEHSSLFSGSYSSLPPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHWWP--LTF 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   176 ISPCVLSEAGFVFTGKODTVQCFSCGGCLGNWEBGDDPWKEHAKWFPKCEFLRSKKSSEE 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256 TLRFSIS------HAARMRIFMYWPSSVPVQ 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                287 PEQLASAGFYYVGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      346 DEIOGRYPHILEQLISTSDITGEEN--ADPPIHFGPGESS-SEDAVMMYTPVVKSALEM 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN----- 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PDLQSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAOWFQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:

APPLICANT: MacKenate, Robert G

APPLICANT: MacKenate, Alexander E

APPLICANT: Liston, Peter

APPLICANT: Baird, Stephen

APPLICANT: Tang, Benjamin K

APPLICANT: Tang, Benjamin K

APPLICANT: Trang, Christine

TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND

TITLE OF INVENTION: DISEASE

TITLE OF INVENTION: DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38 LEEEEQKERAKWOKGYNSOMRSEAKRLKTFVTYEPYSSWIP---QEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.3%; Score 462; DB 3; Length 618;
24.7%; Pred. No. 5.9e-33;
tive 93; Mismatches 238; Indels 154;
                                                                                                                                                                                          580 ----SWWIPCGHLWC---QECAPSLRKCPICRGIIKGTWRT 615
                                                                                                                                          540 QQLKNQVLFLLDDYKBICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THIR REPERENCE: 07891/009002

CURRENT APPLICATION NUMBER: US/09/212,971B

CURRENT FILING DATE: 1998-12-16

EARLIER APPLICATION NUMBER: 60/030,590

EARLIER APPLICATION NUMBER: 60/030,590

EARLIER APPLICATION NUMBER: 08/800,929

EARLIER FILING DATE: 1996-11-14

EARLIER PILING DATE: 1996-11-14

EARLIER FILING DATE: 1997-02-13

NUMBER OF SEQ ID NOS: 17

SOFTWARE: FASTESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                 US-09-212-971-8; Sequence 8, Application US/09212971B; Patent No. 6107041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 24.71
Matches 159; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                            ક
                                                                                      g
                                                                                                                                      ò
                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 È
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
```

```
176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         485
                                                                                                                                                                                                                                                                                                                                                                                             145
                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                              쉱
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                             ò
24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    490
                                                                                      144
                                                                                                                 140
                                                                                                                                               -----LKSRL-----RGGKMRY--QEEEARLASFRNWPFYVQG 175
                                                                                                                                                                176 ISPCVLSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE 235
                                                                                                                                                                                                                       236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                   296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT 355
                                                                                                                                                                                                                                                                                                                                                  287 PROLASAGFYYVGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV 345
                                                                                                                                                                                                                                                                                                                                                                              356 PDLQSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                                                                                                                                                                  346 DEIGGRYPHILEQLLSTSDTTGEEN--ADPPIIHFGPGESS-SEDAVMMTPVVKSALEM 402
                                                                                                                                                                                                                                                                                                                                                                                                                                          SP-----ATDHLLGCDLSIAS 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                            | : |||| : |||403 GFNRDLVKQTVLSKILTTGENYKTVNDIVSALLNAEDEKREEBKEKQAEBWASDDLSLIR 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KNRMALFQQLTCVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELIDTIWVKGNAAAN 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----CCPLINRFQLVFYLSLSSTR----PDEGLASIICDQLLEK--EGSVTEMCMRNII 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      523 IFKNC---LKEIDSTLYKNLFVDKNMKYIPTBDVSGLSLEEQLRRLQEERTCKVCMDKEV 579
                                                        80
                           94
                                                     28 LSDWTNSNKQKMKYDFSCE-----LYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDK
                                                                                   95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN-----
                                                                                                     443 KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG----
                           38 LEEEEQKERAKMOKGYNSOMRSEAKRLKTFVTYEPYSSWIP---OEMAAAGFYFTGVKSG
 93; Mismatches 238; Indels 154; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540 QQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             & HERBERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/08569749
Facture No. 6187557
GENERAL INFORMATION:
APPLICANT: Rothe, Mike
APPLICANT: Goeddel, David V
ITTLE OF INVENTION: INHIBITORS OF APOPTOSIS
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
COUNTY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALBRITTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/569,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
US-08-569-749-2
   159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     580
                                                                                                                                                145
   Matches
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                              ò
                                                       셤
                                                                                         ઠ
                                                                                                                ద
                                                                                                                                                8
                                                                                                                                                                       셤
                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                ò
```

```
415 SFRHMSLLDISSDLATDHLLGCDLSIASKHISKPVQEP-LVLPEVFGNLNSVMCVEGEAG 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287 PEQLASAGFYYVGRNDDVXCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        346 DEIQGRYPHLLEQLLSTSDTTGEEN--ADPPIIHFGPGESS-SEDAVMMTPVVKSALEM 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 474 SGKTVLLK-KIAPLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTE 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: MacKenzie, Alexander E
APPLICANT: Liston, Peter
APPLICANT: Baird, Stephen
APPLICANT: Tsang, Benjamin K
APPLICANT: Pract, Christine
TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND
TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------LKSRL-----RGGKMRY--QEEBARLASFRNWPFYVQG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ISPCVISEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |:|:::::||:||:||:||
---ANVINKQEHDII------KQKTQIPLQARELID------TILVKGNAAANI 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256 TLRFSIS------HAARMRTFMYWPSSVPVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             356 PDLOSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38 LEBEBOKERAKMOKGYNSOMRSEAKRLKTFVTYEPYSSWIP---OEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     533 MCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDI
                                                                                                                                                                                                                                                                                                                                                                                 6.3%; Score 462; DB 3; Length 618;
26.0%; Pred. No. 5.9e-33;
tive 82; Mismatches 214; Indels 146;
NAME: Brezner, David J.
REGISTRATION NUMBER: 24,774
REPERBNCE/DOCKET NUMBER: A-62464/DJB
TELECOMUNICATION INFORMATION:
TELEFAX: (415)781-1989
TELEFAX: (415)781-1989
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 618 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 8, Application US/09617053A
Patent No. 6300492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                    Best_Local Similarity 26.0
Matches 155; Conservative
                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-617-053A-8
                                                                                                                                                                                                                                                                                                                                       US-08-569-749-2
```

```
US-09-201-936-8
                                                                                                                                                                                                                                                                                                                                                              145
                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                   24;
                                                                                                                                                                                                                                                                                                                                             144
                                                                                                                                                                                                                                                                                                                                                                                                                              141 PTLEHSSLFSGSYSSLPPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWP--LTF 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256 TLRPSIS------NLSMOT-----HAARMRTFMYWPSSVPVQ 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           287 PEQLASAGFYYVGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GFNRDLVKQTVLSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIR 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG---- 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----CCPLINRFQLVFYLSLSSTR-----PDEGLASIICDQLLEK--EGSVTEMCMRNII 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  523 IFKNC---LKEIDSTLYKNLFVDKNMKYIPTEDVSGLSLEEQLRRLQEERTCKVCMDKEV 579
                                                                                                                                                                                                                                                                                                                                                                                                         -----RGGKWRY--QEEEARLASFRNWPFYVQG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         356 PDLQSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWPQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                  94
                                                                                                                                                                                                                                                                                                                                                            LEEEEQKERAKMQKGYNSQMRSEAKRLKTFVTYEPYSSWIP---QEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                   176 ISPCVLSBAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWFRESAVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VAALAKAGLPYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       346 DEIOGRYPHLIEQLISTSDTTGEEN--ADPPITHFGFGESS-SEDAVMANTPVVKSALEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----ATDHLLGCDLSIAS
                                                                                                                                                                                                                                                                                                                                            95 IQCPCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                463 KNRMALFQQLTCVLPILDNLLKANVINKQEHDIIKQKTQIPLQARELIDTIWVKGNAAAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 29, Application US/09069023A

Patent No. 6348573

GENERAL INFORMATION:
APPLICANT: Nunez, Gabriel
APPLICANT: Inohara, Nachiro
APPLICANT: Resevention
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR IDENTIFYING APOPTOSIS
TITLE OF INVENTION: SIGNALING PATHWAY INHIBITORS AND ACTIVATORS
                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                 Indels 154;
                                                                                                                                                                                                                   6.3%; Score 462; DB 3; Length 618; 24.7%; Pred. No. 5.9e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540 QQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SF-----BHMSLLDISSDL
                                                                                                                                                                                                                                                93; Mismatches 238;
           FILE REFERENCE: 07891/00903
CURRENT APPLICATION NUMBER: US/09/617,053A
CURRENT FILING DATE: 2000-07-14
FRIOR APPLICATION NUMBER: US/08/800,929
FRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
SOFTWARE: FastSEQ for Windows Version 4.0
SSOFTWARE: 618
 DISEASE
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                   Similarity
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
US-09-069-023-29
                                                                                                                                                                                    US-09-617-053A-8
                                                                                                                                                                                                                                Best Local Sim
Matches 159;
                                                                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                                                                                                                                                         145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  443
                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                            28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          580
                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346 DEIQGRYPHLLEQLLSTSDTTGEEN--ADPPIIHFGPGESS-SEDAVMMTPVVKSALEM 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKSRL-----RGGKMRY--QEBEARLASFRNWPFYVQG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141 PTLEHSSLFSGSYSSLSPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWP--LTF 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISPCVLSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           256 TLRFSIS-----HAARMRTFMYWPSSVPVO 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSABVT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287 PEQLASAGFYYVGRNDDVKCFCCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-BFV 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       415 SFRHMSLLDISSDLATDHLLGCDLSIASKHISKPVQEP-LVLPEVFGNLNSVMCVEGEAG 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  474 SGKTVLLK-KIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTE 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN----- 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         356 PDLQSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28 LSDWTWSNKQNWKYDFSCE-----LYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDK 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 533 MCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDI 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403 GFNR------DL------VKQTVQSKILTTGENYKTVNDIVSALLNAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38 LEBERGKERAKMOKGYNSOMRSEAKRLKTFVTYEPYSSWIP---OEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----ILDNLLK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.3%; Score 462; DB 3; Length 618;
26.0%; Pred. No. 5.9e-33;
tive 82; Mismatches 214; Indels 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Litton, Petchen
TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
FILE REPERENCE: 07991/003003
CURRENT APPLICATION NUMBER: 09/011,336
CURRENT FILING DATE: 1998-12-01
EARLIER APPLICATION NUMBER: 09/011,356
EARLIER PILING DATE: 1998-02-04
EARLIER PILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: UM-03333
CURRENT APPLICATION NUMBER: US/09/069,023A
CURRENT FILING DATE: 1998-04-27
NUMBER OF SEQ ID NOS: 38
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Application US/09201936
Patent No. 6541457
GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
                                                                                                                                                                                                                                                                                                                                                                                                                                155; Conservative
                                                                                                                                                                                                                               ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-069-023-29
                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 155; Conserv
```

```
07891/003002
                                                                                                                                                                                                                                                                                         Matches 159; Conservative
                                                                                                                                                                                               TYPE: PRT
CORGANISM: Homo sapiens
US-09-011-356-8
                                                                                                                                                                                 LENGTH: 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        443
                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    176
                                                                                                                                                                                                                                                          Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                             24;
                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                                                                                                                                  235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDFLDDHTRCFPNCPFLQNMKSSAEVT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          287 PEQLASAGEYYVGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             403 GFNRDLVKQTVLSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEMASDDLSLIR 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              443 KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG---- 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           463 KORMALFÓGLTCVLPILDNILKANVINKÓEHDIIKQKTOIPLOARELIDTIWVKGNAAAN 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----CCPLINRFQLVFYLSLSSTR-----PDEGLASIICDQLLEK--EGSVTEMCMRNII 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN----- 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          356 PDLOSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                       28 LSDWINSNKOKWKYDFSCE----LYRMSIYSIFPAGVPVSERSLARAGFYYIGVNDK
                                                                                                                                                                                                                                                                                                                                        38 LEEEEQKERAKMQKGYNSQMRSEAKRLKTFVTYEPYSSWIP---QEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                                                                                                 ------DKSRL-----BKGRL------RGGKMRY--QEBEARLASFRNWPFYVQG
                                                                                                                                                                                                                                                                                                                                                                                                                                          176 ISPCVLSEAGFVFTGKODTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSPSELARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPFL---ENSLE
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                               Query Match 6.3%; Score 462; DB 4; Length 618; Best Local Similarity 24.7%; Pred. No. 5.9e-33; Matches 159; Conservative 93; Mismatches 238; Indels 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540 QQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 8, Application US/09011356A
Patent No. 6656704
GENERAL INFORMATION.
APPLICANT: Kozneluk, Robert G.
APPLICANT: MacKenzie, Alexander E.
APPLICANT: Baird, Stephen
APPLICANT: Liston, Peter
TITLE OF INVENTION: MAMMALIAN IAP GENE FAMILY, PRIMERS,
TITLE OF INVENTION: PROBES, AND DETECTION METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----SVVFIPCGHLVVC---QECAPSLRKCPICRGIIKGTVRT
EARLIER FILING DATE: 1996-08-05
EARLIER APPLICATION NUMBER: 08/576,956
EARLIER PILING DATE: 1995-12-22
EARLIER APPLICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
NUMBER OF SEQ ID NOS: 45
SOFTWARE: FastSEQ for Windows Version 3.0
SOFTWARE: 618
                                                                                                                                       TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SF-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
US-09-011-356-8
                                                                                                                                                                   US-09-201-936-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                                                                                                                                                                                   145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    580
                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

```
24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          256 TLRFSIS-----HAARWRTFWYWPSSVPVQ 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141 PTLEHSSLFSGSYSSLPPNPLNSRAVEDISSSRTNPYSYAMSTERARFLTYHMWP--LTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDLOSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAOWFQEAKNLNEQLRAAYTSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     346 DEIQGRYPHLLEQLLSTSDTTGEEN--ADPPIHFGPGESS-SEDAVMANTPVVKSALEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28 LSDWINSNKOKNKYDFSCR-----LYRMSTYSTFPAGVPVSFRSLARAGFYYTGVNDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----LKSRL-----RGGKMRY--QEEEARLASFRNWPFYVQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISPCVLSEAGEVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287 PEQLASAGEYYVGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----ATDHLLGCDLSIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         491 ----CCPLINRFQLVFYLSLSSTR-----PDEGLASIICDQLLEK--EGSVTEMCMRNII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38 LEEEEQKERAKMOKGYNSOMRSEAKRLKTFVTYEPYSSWIP---QEMAAAGFYFTGVKSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95 IQCFCCSLILFGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Score 462; DB 4; Length 618;
; Pred. No. 5.9e-33;
93; Mismatches 238; Indels 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540 QQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415 SF-------RHMSLLDISSDL------
CURRENT APPLICATION NUMBER: US/09/011,356A
CURRENT FILING DATE: 1996-09-14
EARLIER APPLICATION NUMBER: PCT/IB96/01022
EARLIER FILING DATE: 1996-08-05
EARLIER FILING DATE: 1995-12-22
EARLIER FILING DATE: 1995-108-08
EARLIER FILING DATE: 1995-08-04
NUMBER: PERICATION NUMBER: 08/511,485
EARLIER FILING DATE: 1995-08-04
NUMBER: PERICATION NUMBER: 08/511,485
SEALLIER FILING DATE: 1995-08-04
NUMBER: PERICER FILING DATE: 1995-08-04
NUMBER: PROFINARE: PROFINE FILING DATE: 1995-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 223, Application US/09672717
Patent No. 6673917
GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G.
APPLICANT: LaCasse, Eric
                                                                                                                                                                                                                                                                                                                                                                                                                                                 n 6.3%;
Similarity 24.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-672-717-223
```

```
24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                95 IQCECCSLILEGAGLTRLPIEDHKRFHPDCGF---LLNKDVGNIAKYDIRVKN----- 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----LKSRL-----RGGKMRY--QEEEARLASFRNWPFYVQG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         141 PTLEHSSLFSGSYSSLPPNPLNSRAVEDISSSRTNPYSYAMSTEEARFLTYHMWP--LTF 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176 ISPCVLSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEE 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236 ITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYBELRLDSFKDWPRESAVG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            256 TLRFSIS------NLSMQT-----HAARMRTFMYWPSSVPVQ 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296 VAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287 PEQLASAGFYYVGRNDDVKCFGCDGGLRCWESGDDPWVEHAKWFPRCEFLIRMKGQ-EFV 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              356 PDLQSR-GELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSA 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SF-----ATDHLLGCDLSIAS 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 403 GFNRDLVKQTVLSKILTTGENYKTVNDIVSALLNAEDEKREEEKEKQAEEWASDDLSLIR 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     443 KHISKPVQEPLVLPEVFGNL---NSVMCVEGEAGSGKTVL----LKKIAFLWASG---- 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491 ----CCPLLNRFQLVFYLSLSSTR-----PDEGLASIICDQLLEK--EGSVTEMCMRNII 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28 LSDWTNSNKQKMKYDFSCE-----LYRMSTYSTFPAGVPUSERSLARAGFYYTGVNDK 80
                                                                                                                                                                                                                                                                                                                                                                                        38 LEEEEBOKERAKMOKGYNSOMRSEAKRLKTFVTYEPYSSWIP---QEMAAAGFYFTGVKSG 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 6.3%; Score 462; DB 4; Length 618;
Best Local Similarity 24.7%; Pred. No. 5.9e-33;
Matches 159; Conservative 93; Mismatches 238; Indels 154; Gaps
          APPLICANT: Holcik, Martin
APPLICANT: Young, Sean
TITLE OF INVENTION: Antisense IAP Nucleic Acids and Uses
TITLE OF INVENTION: Thereof
FILE REFERENCE: 07891/025001
CURRENT APPLICATION NUMBER: US/09/672,717
CURRENT FILING DATE: 2000-09-28
NUMBER OF SEQ ID NOS: 231
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 23
LENGTH: 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540 QQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRT 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----SVVPIPCGHLVVC---QECAPSLRKCPICRGIIKGTVRT 615
Baird, Stephen
Holcik, Martin
                                                                                                                                                                                                                               TYPE: PRT
CORGANISM: Homo sapiens
US-09-672-717-223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ર્જ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

Search completed: March 26, 2005, 09:13:40 Job time : 30 Becs inis Page Blank (uspto)

Sequence 2, Appli Sequence 97, Appl Sequence 1013, Appl Sequence 1013, Appl Sequence 8, Appli Sequence 3, Appli Sequence 200, Appli Sequence 200, Appli Sequence 21, Appli Sequence 6, Appli Sequence 6, Appli Sequence 12, Appli Sequence 14, Appli Sequence 12, Appli Sequence 10, Appli

US-09-974-592-12 US-09-974-592-10 US-09-201-936-10

ALIGNMENTS

```
641
545.5
545.5
536.5
462
                                                                                                                                                                    457.5
                                                                                                                                                                                                                                                                                                                                                457.5
457.5
                                                                                                                                                                                                                                                                                                                                                                                                  441.5
441.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEO ID NO 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                   437
 (without alignments)
4599.352 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          results predicted by chance to have a
1 to the score of the result being printed
of the total score distribution.
                                                                                                                                                                                                                     1 MATQQKASDERISQFDHNLL.....SKYLTILQKWILPFSPIIQK 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
                                                                                                                 March 26, 2005, 09:12:04; Search time 101 Seconds
          version 5.1.6
- 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                            1407402 segs, 331100923 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Applications AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.5
              GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of res
score greater than or equal to
and is derived by analysis of
                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                    US-09-830-338-1
7308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length
                            Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Published
                                                                                                                                                                                                                                                       Scoring table:,
                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š.
```

```
61 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MATQQKASDERISQPDHNLLPELSALLGLDAVQLAKELEEEEGKERAKWQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 8; Length 1403
Sequence 22. Application US/08913322
| Publication No. US20020137028A1
| GENERAL INPORMATION:
| APPLICANT: Korneluk, Robert G.
| APPLICANT: Korneluk, Robert G.
| APPLICANT: MacKenzie, Alexander E.
| APPLICANT: Robertson, George
| APPLICANT: Robertson, George
| APPLICANT: Tamal, Kateu
| TITLE OF INVENTION: USER OF NEURONAL APOPTOSIS INHIBITOR TITLE OF INVENTION: (NAIP)
| FILE REFERENCE: 07891/01301
| CURRENT APPLICATION NUMBER: US/08/913,322
| CURRENT PILING DATE: 1997-01-17
| EARLIER PILING DATE: 1997-01-17
| EARLIER FILING DATE: 1996-01-19
| NUMBER OF SEQ ID NOS: 27
| SOFFWARE: PASESEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 7308; 100.0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100. Matches 1403; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: Homo sapiens
US-08-913-322-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
```

ö

Sequence 22, Appl Sequence 1, Appl Sequence 9, Appli Sequence 9, Appli Sequence 11, Appl Sequence 11, Appl Sequence 11, Appl Sequence 5, Appli Sequence 5, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli

US-08-913-322-22 US-08-913-322-24 US-10-285-408-1 US-09-841-739-9 4 US-10-029-386-33707 US-09-841-739-11 4 US-10-029-386-33933 US-09-841-739-13 US-09-841-739-5 4 US-10-029-386-33933 US-09-841-739-5 4 US-10-449-315-5 4 US-10-10-21-097-49

7308 3970.5 3970.5 1975 1903 1903 1037 661 661 661 654

유 ð 셤 8 6 8 엄 8 유 ₹

```
1141 EYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVA 1200
                                                                                                QLHCLRVLSFFKTLNDDSVVEIAKVAISGGFQKLENLKLSINHKITEEGYRNFFQALDNM 1320
                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KAGLEYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKMRYQEEEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEEJTQYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
                                  SLPNFISLKILNLEGQQFPDEETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQ
                                                     PNIQELDISRHFTECIKAQATTVKSISQCVLRLPRLIRINMISWILDADDIALLNVMKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1403;
                                                                                                                                                                                                                                                                                                                     Sequence 24, Application US/08913322

| Sequence 24, Application US/08913322
| Publication NO.
| Publication NO.
| APPLICANT: Kornelluk, Robert G.
| APPLICANT: Rornelluk, Robert G.
| APPLICANT: Roy, Natalie
| APPLICANT: Roy Natalie
| APPLICANT: Robertson, George
| APPLICANT: ROBERTSON (UMBER: US/08/913,322
| CURRENT APPLICATION NUMBER: US/08/913,322
| CURRENT FILING DATE: 1997-00-17
| EARLIER APPLICATION NUMBER: GB 9601108.5
| SEALIER FILING DATE: 1996-01-19
| NUMBER OF SEQ ID NOS: 27
| SEQ ID NOS: 27
| SEQ: ID NOS: 27
| SEQ: ID NOS: 27
| SEQ: ID NOS: 27
| SEQ: ID NOS: 27
| SEQ: ID NOS: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 7308;
100.0%; Pred. No. 0;
ive 0; Mismatches
                                                                                                                                                                                                                                            1381 HPQSKYLTILQKWILPFSPIIQK 1403
                                                                                                                                                                                                                             HPOSKYLTILOKWILPFSPIIOK 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 100.
Matches 1403; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
CORGANISM: Homo sapiens
US-08-913-322-24
                                                                                                                                                                                                                                                                                                           RESULT 2
US-08-913-322-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                    1201
                                                                                                                                                                                                                              1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                  1261
                                                                                                                                   1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                 1321
                                                                                                                                                                                               1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                      1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                           g
                                                                                                                                                                                       g
                                                                                                                                                                                                                             Š
                                  ò
                                                                                              8 8
                                                                                                                                                     ⋩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ERNIAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EXDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTWLVSCKKLTEIKFSDSFFQAVFVA 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLE 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLLEGIWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                      180
                                                                                                                    240
                                                                                                                                                  240
                                                                                                                                                                                  300
                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OLKNOVLFLLDDYKEICSIPOVIGKLIOKNHLSRTCLLIAVRTNRARDIRRYLETILEIK 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FDDVAVFKSYMERLSLRNKATARILKATVSSCGELALKGFFSCCFFFNDDDLAEAGVDED 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPRISLQ 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDLIMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 RGELCELLETTSESNLEDSTAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                      LSEAGEVFTGKQDTVQCFSCGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEEITQYI
                                                                                                                                     181 LSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWPPKCEFLRSKKSSEEITQYI
                                                                                                                                                                                   OSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
                                                                                                                                                                                                                                                                                                                                                                          LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                      HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKMRYQEEEARLASFRNWPFYVQGISPCV
                                                                                   HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKMRYQEEEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                               KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                              RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                      121
                                                                                                                                                                                   241
                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                       181
                                                                                                                                                                                                                   241
                            61
                                                        121
                                                                                                                                                                                                                                                                                                                                                                            421
```

ద

ð 엄 δ

셤

쉱 à g ò

ò

g

g

δ

d

ò

g

ò

q

ò

ò

g

8 6

8 6

ઠે

ö

9

180

```
ORGANISM: Homo sapiens
                                                                                                                                                                                      US-10-285-408-1
                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                             ક
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                               1140
                                                                                                                                                                                                                                                                                                                                                         ERNIAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                                                                                ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLBIL 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1380
                                                                                                                                          999
                                                                      540
                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                       960
 420
                  420
                                   480
                                                    480
                                                                                       540
                                                                                                        9
                                                                                                                  QLKNQVLFLLDDYKBICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK 600
                                                                                                                                                           99
                                                                                                                                                                            720
                                                                                                                                                                                             720
                                                                                                                                                                                                               780
                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                     900
KKIAPLWASGCCPLLNRFQLVPYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                              KKIAPLWASGCCPLLNRPQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCWRNIIQ
                                                                                                                                                   PDDVAVPKSYMERLSLRNKATABILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                       FDDVAVFKSYMERLSLRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDED
                                                                                                                                                                                                               EDLTWCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                         EDLIMCLMSKFTAQRLRPFYRFLSPARQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                                                                                                                                                 PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLO
                                                                                                                                                                                                                                                          MQLLRGLWQICPQAYPSMVSEHLLVLALKTAYQSNTVAACSPFVLQPLQGRTLTLGALNL
                                                                                                                                                                                                                                                                                              QYPFDHPESLSLLRSIHPPIRGNKTSPRAHFSVLETCFDKSOVPTIDODYASAFEPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                    1021 MTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLEISAAEQELLLTLPSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                        SIEVSGTIQSQDQIFPNIDKFLCLKELSVDLEGNINVFSVIPEFFPNFHHMEKLLIQISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EYDPSKLVKI I QNSPNLHVFHLKCNPPSDFGSLMTMLVSCKKI TEIKFSDSPFQAVPFVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLPNFISLKILNLEGQQPPDEETSEKFAYILGSLSNLEELILPFGDGIYRVAKLIIQQCQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QLHCLRVLSFFKTLNDDSVVEIAKVAISGGFQKLENLKLSINHKITEGYRNFFQALDNM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PNLQBLDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKER
                                                                                                       QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
                                                                                                                                          APPYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                       QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFBPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                                              SLEVSGTIQSQDQIPPNLDKFLCLKELSVDLEGNINVFSVIPBEFPNFHHMEKLLIQISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTBIKFSDSFFQAVPFVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SLPNFISLKILNLEGQQPPDEETSEKFAYILGSLSNLERLILPTGDGIYRVAKLIIQQCQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QLHCLRVLSFFKTLNDDSVVEIAKVAISGGFQKLENLKLSINHKITEEGYRNFFQALDNM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PNLQELDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                         541
                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                         961
                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                                                                                                                                              1081
                                                                                                                                                                                                                                                                                                                                                                                                                                              1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1381
                 361
                                  421
                                                                                      481
                                                                                                                                                           601
                                                                                                                                                                                             199
                                                                                                                                                                                                               721
                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1381
361
                                                                     481
                                                                                                       541
                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                         961
            g
                           8 &
                                                                $ 8 $
                                                                                                                   g
                                                                                                                                        6 B 6
                                                                                                                                                                                        g
                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                          음 &
                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                        8 6
                                                                                                                                                                                                                                                                                                                                                                                      8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                              જે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
RESULT 3
US-10-285-408-1
IS-10-285-408-1
Sequence.1. Application US/10285408
Sublication No. US20030108967A1
GENERAL INFORMATION:
APPLICANT: IKEDA, Johe
APPLICANT: SAKAI, Harumi
ITILE OF INVENTION: monoclonal Antibodies Against Human Apoptosis Inhibitory Protein P
ITILE OF INVENTION: and Method For Assaying the NAIP
ITILE OF INVENTION: and Method For Assaying the NAIP
ITILE OF INVENTION: and Method For Assaying the NAIP
CURRENT APPLICATION NUMBER: US/10/285,408
CURRENT FILING DATE: 2001-04-26
PRIOR FILING DATE: 2001-04-26
PRIOR FILING DATE: 1999-10-22
NUMBER OF SEQ ID NOS: 2
SEQ ID NO 1
LENGTH: 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AKRLKTFVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661 FDDVAVFKSYMERLSLRNKATABILKATVSSCGELALKGFFSCCFEFNDDDLARAGVDED 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEGKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCRINIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QLKNQVLFLLDDYKSICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLBTLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARLKTEVTYEPYSSWIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGKMRYQEBEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HPDCGFLLNKDVGNIAKYDIRVKNLKSRLRGGRARYQEBEARLASFRNWPFYVQGISPCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLDISSDLATDHLLGCDLSIASKHISKPVQBPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCEFLRSKKSSEEITQYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LLDISSDLATDHLLGCDLSIASKHISKPVQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 7308;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
Matches 1403; Conservative
```

ij

9

120

180 690 240 750 300 360 870 420

```
APPLICANT: Bertin, John TITLE OF INVENTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN FAMILY AND USES THERE FILE REFERENCE: 07334-32901 CURRENT APPLICATION WHOBER: US/10/449,315 CURRENT FILING DATE: 2003-05-30 PRIOR APPLICATION NUMBER: US/09/841,739
                                                                                                                                               HISRICITIAVRINRARDIRRYLETILBIQAFPFYNTVCILKRLFSHNWTRLRKFMVYFG
                                                                                                                                                                                                                                                                SKASVTKCSISKLELSAAEQELLLTLPSLESLEVSGTIQSQDQIFPNLDKFLCLKELSVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LEGNINVESVI PERFPNFHHMEKLLIQISAEYDPSKLVKLIQNSPNLHVFHLKCNFFSDF
                                                                                                                              PDEGLASIICDOLLEKEGSVTEMCMRNIQQLKNQVLFLLDDYKEICSIPQVIGKLIQKN
                                                                                                                                                                                                                                                 KNOSLOKIOKTOLFVAALCAHWEQYPEDPSEDDVAVFKSYMERLSLRNKATAEILKATVS
                                                                                                                                                                                                                                                                                                                                                                                    LIHLYDNKESLENISENDDYLKHQPEISLOMQLLRGLWQICPQAYFSMVSEHLLVLALKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSVLETCFDKSQVPTIDQDYASAFEPMNEWBRNIAEKEDNVKSYMDMQRRASPDLSTGYW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KLSPKOYKIPCLEVDVNDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KLSPKQYKIPCLEVDVNDIDVVGQDMLEILMTVFSASQRIELHLMHSRGFIESIRPALEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSLMTMLVSCKKLTEIKFSDSFFQAVPFVASLPNFISLKILNLEGOOFPDEETSEKFAYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSSTR
                                                                                                                                                                                           HLSRICLLIAVRINRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFMVYFG
                                                                                                                                                                                                                                                                                                         SCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFYRFLSPAFQEF
                                                                                                                                                                                                                                                                                                                            LAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYVSSLPSTKAGPKIVSH
                                                                                                                                                                                                                                                                                                                                                                                                                            LIHIVDNKESLENISENDDYLKHQPEISLQMQLLRGLWQICPQAYFSMVSEHLLVLALKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AYOSNTVAACSPEVILOFILOGRTLTIGALNILOYFFDHPESLSLIRSIHFPIRGNKTSPRAH
                                                                       EPLVL PEVFGNINSVMCVEGEAGSGKTVLLKKI AFLWASGCCPLLNRFQLVFYLSISSTR
                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGSLSNLEELILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEI 1282
                                         51;
             782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                          Indels
               6
            54.3%; Score 3970.5; DB 993.6%; Pred. No. 3.5e-308; ive 1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEGNINVFSVIPEEFPNFHHMEKLLIQISAEYDPSKL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 9, Application US/10449315 Publication No. US20030190679A1 GENERAL INFORMATION:
               Query Match
Best Local Similarity 93.6
Matches 779; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
US-10-449-315-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1171
                                                                         451
                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  698
                                                                                                    ч
                                                                                                                                 511
                                                                                                                                                                                             571
                                                                                                                                                                                                                                                     631
                                                                                                                                                                                                                                                                                                                                                                      751
                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                               811
                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                              691
                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ኞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          장 음
                                                                                                                                 ò
                                                                                                                                                           요
                                                                                                                                                                                           ò
                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARD-RELATED PROTEIN FAMILY AND USES THERE
                                                                                                                                                                                                                                                                                                                                                                                                                   SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EYDPSKLVKLIQNSPNLHVPHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVFVA 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SLPNFISLKIINLEGQQFPDBETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQ 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QLHCLRVLSFFKTLNDDSVVEIAKVAISGGFQKLENLKLSINHKITEEGYRNFFQALDNM 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PNLOELDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKER 1380
                                                                                                                                                                                                                                                                                  ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                   961 ERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEIL 1020
                                                                                                                                                                                                                                                                                                                                           MTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLE 1080
                                                                                                                                                                                                                                                                                                                                                                                                     1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVA 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PNLQELDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKER 1380
                                                                                                                                                                                                                                                     960
                  720
                                             780
                                                                                                       840
                                                                                                                                   840
                                                                                                                                                                900
                                                                                                                                                                                             900
                                                                                                                                                                                                                          960
EDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINS
                                                                                                                             PINTUSAYNNFLNYVSSLPSTRAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ
                                                                                                                                                                                                                                         SLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SLPNFISLKILNLEGOOFPDEETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQ
                                                                                                       PMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQ
                                                                                                                                                                 MQLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL
                                                                                                                                                                                           MQLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL
                                                                                                                                                                                                                          QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 9, Application US/09841739; Sequence 9, Application US/09841739; Patent No. US20020034784A1; Sequence 9, Application US/09841739; Patent No. US20020034784A1]; GENERAL INFORMATION:
APPLICANT: Bertin, John
TITLE OF INVENTION: NOVEL MOLECULES OF THE CAR.
FILE REFERENCE: 07334-329001; CURRENT FILING DATE: 2001-08-29; PRIOR APPLICATION NUMBER: US 60/61,822; PRIOR APPLICATION NUMBER: US 60/161,822; PRIOR APPLICATION NUMBER: US 60/161,822; PRIOR APPLICATION NUMBER: US 60/161,822; PRIOR FILING DATE: 1999-10-27; NUMBER OF SEQ ID NOS: 16; SOFTWARE: FastSEQ for Windows Version 4.0; SEQ ID NO 9; LENGTH: 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HPOSKYLTILOKWILPFSPIIOK 1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
CORGANISM: Homo sapiens
US-09-841-739-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
US-09-841-739-9
                                                                                                                                                                                                                                                                                                                                                                                                      1081
                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1381
                                                                                                                                                                                              841
                                                                                                                                                                                                                                                       106
                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1381
                                                                                                         781
                                                                                                                                    781
                                                                                                                                                                 841
                                               721
                                                                          721
                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                    961
                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                 8 8
                                                                                                                                                                                                                                                                                                                                                                  ď
                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                      8
                                                                      g
                                                                                                       ઠે
                                                                                                                             g
                                                                                                                                                              ò
                                                                                                                                                                                        g
                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

1230

729

1110

99

900

1050

540

480 990 1170

```
RESULT 6
US-10-029-386-33707
                                                                                                                                                                                                                                                                                                                                                                                                         US-10-029-386-33707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
US-09-841-739-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               947
                                                                                                                                                                                                                                                                                                           TYPE: PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             જ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLSPKQYKIPCLEVDVNDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALEL 1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .051 SKASVTKCSISKLELSAAEQELLITLPSLESLEVSGTIQSQDQIFPNLDKFLCLKELSVD 1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1111 LEGNINVESVIPEEPPNFHHMEKLLIQISAEYDPSKLVKLIQNSPNLHVFHLKCNFFSDF 1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1171 GSLMTMLVSCKKLTBIKFSDSPFQAVPFVASLPNFISLKILNLEGQQPPDEETSEKFAYI 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601 SKASVTKCSISKLELSAAEQELLLTLPSLESLEVSGTIQSQDQIPPNLDKFLCLKELSVD 660
                                                                                                                                                                                                                                                                                                                                                          511 PDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQKN 570
                                                                                                                                                                                                                                                                                                                                                                           PDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQKN 120
                                                                                                                                                                                                                                                                                                                                                                                                                          HLSRTCLLIAVRTNRARDIRRYLETILBIKAPPYNTVCILRKLFSHNMTRLRKFMVYFG 630
                                                                                                                                                                                                                                                                                                                                                                                                                                             121 HLSRICLLIAVRINRARDIRRYLETILEIQAFPPYNIVCILRKLFSHNMIRLRKFMVYFG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KNOSLOKIOKTPLFVAAICAHWFQYPFDPSFDDVAVPKSYMERLSLRNKATAEILKATVS 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYVSSLPSTKAGPKIVSH 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 LAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYVSSLPSTKAGPKIVSH 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AYQSNTVAACSPFVLQFLQGRTLTLGALNLQYFFDHPESLSLLRSIHFPIRGNKTSPRAH 930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 AYQSNTVAACSPFVLQFLQGRTLTLGALNLQYPFDHPESLSLLRSIHFSIRGNKTSPRAH 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PSVLETCFDKSQVPTIDQDYASAFEPMNEWERNLAEKEDNVKSYMDMQRRASPDLSTGYW 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481 FSVLETCEDKSQVPTIDQDYASAFEFNNEWERNLAEKEDNVKSYMDMQRRASPDLSTGYW 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541 KLSPKOYKIPCLEVDVNDIDVVGQDMLRILMTVFSASQRIELHLNHSRGFIESIRPALEL 600
                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                           1 EPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRPQLVFYLSLSSTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KNQSLQKIQKTPLFVAAICAHWFQYPFDPSFDDVAVFKSYMERLSLRNKATAEILKATVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFYRFLSPAFQEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 SCGELALKGFFSCCFFFNDDDLAEAGVDEDEDLTWCLMSKFTAQRLRPFYRFLSPAFQEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----VASLPNFISLKILNLEGOOFPDEETSEKFAYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLHLVDNKESLENISENDDYLKHQPEISLQMQLLRGLWQICPQAYFSMVSEHLLVLALKT
                                                                                                                                                                                                                                                                                        451 EPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFOLVFYLSLSSTR
                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1231 LGSLSNLEELILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEI 1282
                                                                                                                                                                                                                                                         51;
                                                                                                                                                                                                                         DB 14; Length 782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        730 LGSLSNLEELILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEI
                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                       54.3%; Score 3970.5; DB 1. 93.6%; Pred. No. 3.5e-308;
                                                                                                                                                                                                                                                        1; Mismatches
PRIOR FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 09/697,089
PRIOR FILING DATE: 2000-10-26
PRIOR APPLICATION NUMBER: US 60/161,822
PRIOR FILING DATE: 1999-10-27
NUMBER OF SEQ ID NOS: 16
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 9
LENGTH: 782
                                                                                                                                                                                                                                                        Matches 779; Conservative
                                                                                                                                                    TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                      US-10-449-315-9
                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                          571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               931
                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                        ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    જ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
Sequence 33707, Application US/10029386

Sequence 33707, Application US/10029386

Publication No. US200301947041

SEGNERAL INFORMATION:
APPLICANT: Fenn, Sharron G.
APPLICANT: HORAL David R.
APPLICANT: HARL, David R.
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
FILE REPERBNCE: AEOMICA-K-2
CURRENT FILING DAVE: 2001-12-20
NUMBER OF SEQ ID NOS: 34288
SOFTWARE Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 33707
LIENGTH: 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: BERTIN, John
TITLE OF INVENTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN FAMILY AND USES THERE
TITLE REPERENCE: 07334-329001
CURRENT APPLICATION NUMBER: US/09/841,739
CURRENT FILING DATE: 2001-08-29
PRIOR PILING DATE: 2000-10-26
PRIOR APPLICATION NUMBER: US 60/697,089
PRIOR PILING DATE: 1999-10-27
PRIOR FILING DATE: 1999-10-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DQDYASAFEPMNEWERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDV 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELS 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 DQDYASAFEPWNEWERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIPCLEVDV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 NDIDVVGQDMLEILMTVPSASQRIELHLANHSRGFIESIRPALELSKASVTKCSISKLELS 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 HQDLGLYHLKQINSPMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 NDDYLKHOPEISLOMOLLRGLWOICPOAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 FLQGRILTLGALNLQYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTI 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HODLGLYHLKQINSPMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENISE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NDDYLKHQPEISLQMQLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          707 FNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIELLDSDRQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLOGRTLTLGALNLQYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: MAP TO U80017.1
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 0.91
OTHER INFORMATION: SWISSPROT HIT: Q13075, EVALUE 0.00e+00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 27.0%; Score 1975; DB 14; Best Local Similarity 100.0%; Pred. No. 5.2e-149; Matches 385; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1067 AAEQELLITLPSLESLEVSGTIQSQ 1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AARQELLLTLPSLESLEVSGTIQSQ 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11, Application US/09841739
Patent No. US20020034784A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens FEATURE:
```

ø

```
Sequence 11, Application US/10449315
; Sequence 11, Application US/10449315
; Publication No. US20030190679A1
; GENERAL INFORMATION:
; APPLICANT: Bertin, John
; TITLE OF INVERTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN FAMILY AND USES THEREC
; FILE REFERENCE: 07334-329001
; CURRENT APPLICATION NUMBER: US/10/449,315
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: US 09/697,089
; PRIOR PLING DATE: 2001-10-26
; PRIOR PLING DATE: 2001-10-26
; PRIOR APPLICATION NUMBER: US 60/161,822
; PRIOR APPLICATION NUMBER: US 60/161,822
; PRIOR APPLICATION NUMBER: US 60/161,822
; RIOR APPLICATION NUMBER: US 60/161,822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     973 SYMDMQRRASPDLSTGYWKLSPKQYKIP--------CLEVDVNDIDVV 1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDY--ASAFEPMNEWERNLAEKEDNVK 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EHLLVLALKTAYQSNTVAACSPFVLQ-FLQGRTLTLGALNL-QY---FFDH-PESLSLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       511 PDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEI----CSIPQVIGKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  567 IQKNHLSRTCLLIAVRTNRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   451 EPLVLPEVFGNINSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSSTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 ADGGLASILCDQLLDIEGSVTEQTFRAILLQLKNQVLFLLDGYNEIKPQNCSIPQVIGAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VYFGKNOSLOKIOKTPLFVAAICA-HWFQYPFDPSFDDVAVFKSYMERLSLRNK----A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYVSSLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLQMQLLRGLWQICPQAYFSMVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                681 TAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                       -----LNDDSVVEIAKVAISGGFQ 1292
                                            164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88; Mismatches 214; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26.0%; Score 1903; DB 14; 50.9%; Pred. No. 1.2e-142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: majority sequence US-10-449-315-11
                       ----IIQQCQQLHCLRVLSFFKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 50.9<sup>†</sup>
Matches 484; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                801
                         1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            915
                         ઠ
                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----CSISKLELSAAEQELLITLPSLES----LE-----VSGTIQSQDQIFPNL 1098
                                                                                                                                                                                                                                               24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SYMDMQRRASPDLSTGYWKLSPKQYKIP-----C-----CLEVDVNDIDVV 1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----RGFIESIRPALELSKASVTK---- 1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1099 DK--FLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISAEYDPSKLVKLIQNSPN 1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1157 LHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVASLPNFISLKILNLEGQ 1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                            61 ADGGLASILCDQLLDIEGSVTEQTFRAILLQLKNQVLFLLDGYNEIKPQNCSIPQVIGAL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                     IQKNHLSRTCLLIAVRTNRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFM 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               681 TAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFY 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 VEAGRAVVSHLAAVVDNKGSLLGLSIADDYLKHQESISLQMQLLQGVKNITEQAILSAVS 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      861 EHLLVLALKTAYOSNTVAACSPFVLO-FLOGRTLTTGALNL-OY---FFDH-PESLSLLR 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDY--ASAFEPMNEWERNLAEKEDNVK 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----VASLEEVISLVILGLEGO 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                              1 EQLVLNGVLGALNSVCIVEGEAGSGKSVLLQKIAFLMGSGKCKALTKFQLVFFLSLSSTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VYFGKNOSLOKIOKTPLFVAAICA-HWFOYPFDPSFDDVAVFKSYMERLSLRNK----A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 AADILKATVSSCGDLALEGVFSHKPDFELDDVAEAGVDEDVLLTTGLLSKFTAQRLKFXY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYVSSLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        801 TKAGPKIVSHLLHLVDNKESLENISENDDYLKHQPEISLOMQLLRGLWQICPQAYFSMVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661 KNLKKMCLISLLELSAAGEGLLLIVKSLSSEPCDLEBIQLVSCCLVAGAVQILAQILHNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721 VKLSILDLSELSVDLDGNIAVHSVIPDEFNVLEQLTALLLQIGADVD-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OFPDEETSEKFAYI-LGSLSNLEELILPTGD-----GIYRVAKL------
                                                                                                                                                                                                                                                                                                                                                                       511 PDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEI----CSIPQVIGKL
                                                                                                                                                                                                                                                                                       451 EPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSSTR
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                               88; Mismatches 214; Indels 164;
                                                                                                                                                                                                       Length 898;
                                                                                                                                                                                                       Score 1903; DB 9;
Pred. No. 1.2e-142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1013 GODMLEIL--MTVFS----ASQRIELHLNHS-
                       Version 4.0
                                                                                                                     FEATURE:
; OTHER INFORMATION: majority sequence
US-09-841-739-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----GSLSSL----
NUMBER OF SEQ ID NOS: 16
SOFWHARE: PastSEQ for Windows
SEQ ID NO 11
LENCTH: 898
                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                     Query Match
Best Local Similarity 50.9%;
Matches 484; Conservative 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1058
```

ద

ò g ð 셤 à g 8 6 8 6

6 B 6

ብ አ

a ò d ò 셤

셤 ò 유 8 셤 ò g õ

```
Sequence 5, Application US/09841739

Patent No. US20020034784A1

BARREAL INFORMATION:
APPLICANT: Bertin, John

TITLE OF INVENTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN PAMILY AND USES THEREC

CURRENT APPLICATION NUMBER: US/09/841,739

CURRENT FILING DATE: 2000-10-26

PRIOR PAPLICATION NUMBER: US 60/161,822

PRIOR PAPLICATION NUMBER: US 60/161,822

PRIOR FILING DATE: 1999-10-27

NUMBER OF SEQ ID NOS: 16

SCOPTWARE: FREUESE (for Windows Version 4.0)

SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     956 PMNEWERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIP------ 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258 -----LAQDLKDLYHTPSFLNP------YPLGEDIDIIFNLKSTFTEPVLWRK 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        450 -----QEPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300 DQHHRRVEQLTLAGLQSPCIIEGESGKGKSTLLQRIAMLWGSGKCKALTKFKFVFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSLSSTRPDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQ--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341 NCPFLONMK-SSAEVTPD---LOSRGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397 FQEAKNLNEQLRAAYTSASFRHMSLLDISSDLATDHLLGCDLSI---ASKHISKPV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          562 -VIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLBTILEIKAFPFYNTVCILRKLFSHNMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    521 RLRKFMVYFGKNOSLOKIOKTPLFVAAICAHWFQYPFDPSFDDVAVPKSYMERLSLRNK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    680 ----ATABILKATVSSCGBLALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLOMOLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNT-VAACSPFVLQPLQGRTLTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397 ALNL-QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              216 NYPLFODLNGOSFEETONWVFFNITSSLIGLFHQTSEGDLDD--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLRPPYRFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             795 V--SSLPSTKAGPKIVSHLLHLVDN------KESLENISENDDYLKHQPEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 9.0%; Score 661; DB 9; Length 1204;
Best Local Similarity 23.5%; Pred. No. 4.4e-43;
Matches 268; Conservative 199; Mismatches 427; Indels 245;
                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-841-739-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Penn, Sharron G.
APPLICANT: Rank, Javid R.
APPLICANT: Rank, David K.
APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
FILE REPERBUCE: ARCMICA.x-2
CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILIG DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 34288
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
                                                         GODMLEIL--MTVFS----ASQRIELHLNHS----RGFIESIRPALELSXASVTK---- 1057
                                                                                                                                    1058 -----CSISKLELSAAEQELLLTLPSLES----LE-----VSGTIQSQDQIFPNL 1098
                                                                                                                                                                                                                                                                                              1157 LHVFHLKCNFFSDFGSLMTMLVSCKKCTEIKFSDSFFQAVPFVASLPNFISLKILNLEGQ 1216
                                                                                                                                                                                                              DK--FLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISAEYDPSKLVKLIQNSPN 1156
                                                                                                                                                                                                                                                                                                                                                                            1217 QPPDEETSEKFAYI-LGSLSNLEELILPTGD-----GIYRVAKL----- 1254
                                                                                                                                                                                                                                                         767
                                                                                                                                                                                                                                                                                                                                     791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRPDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                   851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
61 VORPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSS
                                                                                                                                                           721 VKLSILDLSELSVDLDGNIAVHSVIPDEFNVLEQLTALLLQIGADVD-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    449 VQEPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRPDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQ
                                                                                                                                                                                                                                                                                                                                   ------vasieevisiviigiego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         389 MAQGEAQWFQEAKNINBQLRAAYTSASFRHMSLLDISSDLATDHLLGCDLSIASKHISKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MAQGEAQWPQEAKNLNEQLRAAYTSASFRHMSLLDISSDLATDHLLGCDLSIASKHISKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----IIQQCQQLHCLRVLSFFKT-----LNDDSVVBIAKVAISGGFQ 1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            852 LPDPALVQQLSQV--LSVLSFLQTARLVGWQLDDDSV-----VVITGAFK 894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTHER INFORMATION: MAP TO AC005031.1
CHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 1.6
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 0.95
COTHER INFORMATION: SWISSPROT HIT: Q13075, EVALUE 1.00e-112
US-10-029-386-33933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14.2%; Score 1037; DB 14;
100.0%; Pred. No. 2.1e-74;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                     Sequence 33933, Application US/10029386
Publication No. US20030194704A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNHLSRTCLLIAVRTNRARDIRR 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 203; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-029-386-33933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 33933
LENGTH: 203
                                                         1013
                                                                                                                                                                                                                1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                     768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                   g
                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                       ŝ
                                                                                     유
                                                                                                                      ઠે
                                                                                                                                                                                                              ሯ
                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
```

	562 -VIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMT 620 	621 RLRKEMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPSFDDVAVFKSYMERLSLRNK- 679 1	680ATABILKATVSSCGBLALKGFFSCCFEFNDDLARAGVDEDEDLTMCLMSKFTAQ 734	735 RLRPFYRFLSPAFGEFLAGWRLIELLDSDRQEHQDLGLYHLKQINSPWMTVSAYNNFLNY 794 	795 V-SSLPSTKAGPKIVSHLLHIVDNKESLENISENDDYLKHQPEI 837   :: :  ::   ::   ::  651 TCGSSVEATRAWKHLAAVYQHGCLLGLSIAKRPLWRQESLQSVKN 696	838 SLQMQLLRGLWQICPQAYFSMVSBHLLVLALKTAVQSNT-VAACSPFVLQFLQGRTLTLG 896 :::: ::	897 ALNL-QYFEDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFE 955 :  :	956 PMNEWERNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIP 1000	1001 CLEVDVNDIDVVGQDMLEILMTVFSASQRIELHLANHSRGFIESIRPALELSKASVTKCSI 1060 	1061 SKLELSAAEQELLLTLPSLESLEVSGTIQSODQIFPNLDKFLCLKELSYDLEGNINVF 1118	1119 SVIPEEFPNFHHMEKLLIQISAEXDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLV 1178	1179 SCKKLTEIKFSDSFFQAVPFVA-SLPNFISLKILMLEGQQFPDEETSEKFAY 1229	1230 ILGSLSNLEELILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVBIAKVA 1286 ::::	A 13 P 11	1341 TTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVMKERHPQSKYLTILQKWILPFSP 1399	RESULT 12 US-10-156-733-2 US-10-156-733-2  Sequence 2, Application US/10156733  Publication No. US20030099969A1  GENERAL INFORMATION:  A APPLICANT: Alnemi, Emad S.  TITLE OF INVENTION: IPAR AN ICE-PROTEASE ACTIVATING	TITLE OF INVENTION: FACTOR FILE REFERENCE: 480140.477
Dp	çy q	λό Q	S G	ζό Oγ	δ O	ζζ QΩ	\$ g	oy Og	\$ A	Sp GS	ζς 6	\$ g	y d	Sy qa	Z a	RESULT US-10-1 ; Seque ; Publi ; GENER ; APPI	
: : :     Db 777 AMASWE	QY 1001 CLEVDVNDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCS1 1060	Qy 1061 SKLELSAAEQELLITLPSLESLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVF 1118	QY 1119 SVIPEEFPNFHHMEKLLIQISAEXDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLV 1178	QY 1179 SCKKLTEIKFSDSFFQAVPFVA-SLPNFISLKILMLEGQQFPDEFTSEKFAY 1229	Qy 1230 ILGSLSNLEELILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEIAKVA 1286 ::::  :  :  ::::  :::::::::::::::::::	QY 1287 ISGGFQKLENLKLSINHKITEEGYRNFFQALDNMPNLQELDISRHFTECIKAQA 1340  Db 1083 ILGAFFGKNPLKNFQQLNLAGN-RVSSDGWLAFMGVFENLKQLVFFDFSTKEFLPDF 1138	QY 1341 TTVKSLSQCVLRLPRLIRLNMLSWLLDADDIALLNVWKERHPQSKYLTILQKWILPFSP 1399	RESULT 11 US-10-49-315-5		; TITLE OF INVENTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN FAMILY AND USES THERH ; FILE REFERENCE: 07334-32908. ; CURRENT APPLICATION NUMBER: US/10/449,315 ; CURRENT FILING DATE: 2003-05-30	; PRIOR APPLICATION NUMBER: US /09/841,739 ; PRIOR FILING DATE: 2001-08-29 ; PRIOR APPLICATION NUMBER: US 09/697,089 ; PRIOR FILING DATE: 2000-10-26	TOR TWI	rn .	US-10-449-315-5 Query Match Best Local Similarity 23.5%; Score 661; DB 14; Length 1204; Best Local Similarity 23.5%; Pred. No. 4.4e-43; Matches 268: Conservative 199; Mismatches 47; Indels 245; Gaps 43;	341 NCPFLONMK-SSAEVTPDLQSRGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQW 3	OY 397 FORAKNINEQLRAAYTSASFRHWSLLDISSDLATDHILGCDLSIASKHISKPV 449  Db 258LAQDLKDLYHTPSFLNF	504 LSLSSTRPDEGLASIICDQLLEKEGSVTEMCWRNIIQQLKNQVLFLLDDYKEICSIPQ

ઠ a ò 셤 ò 셤 ò 셤 ઠ 셤 ð g ò g

```
1180 -CKKLTEIKFSDSFP--QAVPFVA-SLPNFISLKILNLEGOOFPDEETSEKFAYILGSLS 1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----QKLENLKLSINHKITEBGYRNFFQALDNMPNLQELDISRHFTECIKAQATTVKSL 1346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32 GKNPLKNFQQLNIAGN-RVSSDGWLAFMGVFENLKQLVFFDFS---TKEFLPDPALVRKL 987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------HLLGCDLSI---ASKHISKPV-----QEPLVLPEVFGNLNSVMCV 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                332 LD-----DHTRCFPNCPFLQNMKSSA--EVTPDL-----QSRGEL----CELLETTSES 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI----IHMILKKGSESCNLFLKSLKEMNYPLFQDLNGQSLFHQTSEGDLDDLAQDLKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1236 NLEE---LILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEIAKVAISGGF-
                                                                                                                                                                                                                                                                                                                                EGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLEKEG
                                                                                                                       819 PC-DLEEIQLVSCCLSANAVKILAQNLHNLVKLSILDL-SENYLEKDGNEALHELIDRMN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | : | | : | : | | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277 YEELRLD----SFKDWPRESAVGVAALAKAGLFYTGIKDIVQCFSCGGCLEKWQEGDDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44 LDYLNFIKDNSRA-----LIQRMGMTVIKQITDDLFVWNVLNREEVNIICCEKVEQDAAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          375 NLEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMSLLDISSDLATD---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 8.9%; Score 654; DB 14; Length 1070; Best Local Similarity 23.3%; Pred. No. 1.3e-42; Matches 282; Conservative 213; Mismatches 454; Indels 260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Agarwal, Pankaj
APPLICANT: Agarwal, Pankaj
APPLICANT: Murdock, Paul R.
APPLICANT: Smith, Randal F.
APPLICANT: Smith, Randal F.
APPLICANT: Smith, Randal F.
APPLICANT: Xiang, Zhaoying
TITLE OF INVENTION: NOVEL COMPOUNDS
TITLE OF INVENTION: NOVEL COMPOUNDS
TITLE OF INVENTION: NOVEL COMPOUNDS
TITLE OF INVENTION NUMBER: US/10/221,097
CURRENT FILING DATE: 2002-09-06
FRIOR FILING DATE: 2001-03-05
FRIOR APPLICATION NUMBER: 60/187,107
FRIOR APPLICATION NUMBER: 60/187,107
FRIOR PILING DATE: 2000-03-06
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
FRIOR APPLICATION NUMBER: 60/188,916
FRIOR FILING DATE: 2000-10-03
FRIOR APPLICATION NUMBER: 60/188,916
FRIOR FILING DATE: 2000-10-03
FRIOR APPLICATION NUMBER: 60/188,916
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | : : | | : : : | SQVLSKLTFLQEARLVGWQFDDDDLSVI 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SQCVLRLPRLIRLNMLSWLLDADDIALL 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Sequence 49, Application US/10221097; Publication No. US20030144476A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-221-097-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-221-097-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               432
                                                                                                                                                유
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                962 RNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIP---------CLEVDV 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1007 NDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELS 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FPNFHHMEKLLIQISAEYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVS---- 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .067 AAEQELLLTLPSLESLEVSGTIQSQDQIFPN--LDKFLCLKELSVDLEGNINVFSVIPEE 1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : |:: |:: |||||| || || LQIQKSRCLRNLMKTPLFVDLLIQKNKHKKKVA 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYV--SSL 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PSTKAGPKIVSHLLHLVDN-------KESLENISENDDYLKHQPEISLQMQL 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------FFEHLPNC--ASALDFIKLDFYGG--AMASWE 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LRGLWQICPQAYFSMVSEHLLVLALKTAYQSNT-VAACSPFVLQFLQGRTLTLGALNL-Q 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LKAI----NINSFVECGIHL-----YQESTSKSALSQEFEAFFQGKSLYINSGNIPD 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | : | : | : | : | : | CAQDLXDLYHTPSFLNP-----YPLGEDIDIIFNLKSTFTEPVLWRKDQHHHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QEPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VEQLTLNGLLQALQSPCIIEGESGKGKSTLLQRIAMIWGSGKCKALTKFKFVFFLRLS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPSFDDVAVFKSYMERLSLRNK-----A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 383 ASDFIR-SLDHCGDLALEGVFSHKFDFELQDV--SSVNEDVLLTTGLLCKYTAQRFKPKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                902 YFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LNEQLRAAYTSASFRHMSLLDISSDLATDHLLGCDLSI---ASKHISKPV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RPDEGLASIICDQLLEXEGSVTEMCMRNI1QQLXNQVLFLLDDYXEICSIPQ---VIGKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             567 IQKNHLSRTCLLIAVRTNRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TABILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | : : : | : | : | : | : | : | : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : | : : : | : : | : : | : : | : : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : | : : : | : : | : : | : : | : : | : : | : : : | : : : | : : | : : : | : : | : : : | : : | : : : | : : | : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : | : : : : | : : : | : : : | : : : : | : : : : | : : : : | : 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           344 FLQNMKS-SAEVTPDLQSRGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
8.9%; Score 654; DB 14; Length 1024;
Best Local Similarity 23.7%; Pred. No. 1.2e-42;
Matches 263; Conservative 197; Mismatches 410; Indels 238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLKSLKEWNYPLPQDLNGQ----SLFHQTSEGDLDD----
CURRENT APPLICATION NUMBER: US/10/156,733
CURRENT FILING DATE: 2002-05-24
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens
US-10-156-733-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   594 YLFD-----
                                                                                                                                                                                               SEQ ID NO 2
LENGTH: 1024
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
```

셤

ò

g

ઠે

g

ठ

셤

ઠે

ò

g

ઠે 윰 ઠે 셤

8 셤

48;

331

43

431

```
FILE REFERENCE: 07334-329001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1252 AKLIIQQCQQLHCLRVLSFFKTLNDDSVVEIAKVAISGGF-----QKLENLKLSINHKI 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   981 ASPDLSTGYWKLSPKQYKIP-----CLEVDVNDIDVVGQDMLEILMTVFS 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1026 ASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELSAAEQELLLTLPSLESLEVS 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTIQSQDQIFPN--LDKFLCLKELSVDLEGNINVFSVIPEEFPNFHHMEKLLIQISAEYD 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1196 VPFVA-SLPNFISLKILNLEGQQFPDEETSEKFAYILGSLSNLEE---LILPTGDGIYRV 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1306 TEEGYRNFFQALDNMPNLQELDISRHFTECIKAQATTVKSLSQCVLRLPRLIRLNMLSWL 1365
                         585
                                                                                                                       645
                                                                                                                                                                                                                       669
                                                                                                                                                                                                                                                                     446
                                                                                                                                                                                                                                                                                                                  759
                                                                                                                                                                                                                                                                                                                                            760 LDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYV--SSLPSTKAGPKIVSHLLHLVDN 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ------KESLENISENDDYLKHQPEISLQMQLLRGLWQICPQAYFSMVSEH 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              863 LIVIJALKTAYQSNT-VAACSPFVLQFLQGRTLTLGALNL-QYFFDHPESLSLLRSIHFPI 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            921 RGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEWERNLAEKEDNVKSYMDMQRR 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | :| :| | : | | : | : : : : : | :| | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | :
                                                                    272 TIRKQTFWAMLLKIRQRVLFLLDGYNÈF--KPQNCPBIBALIKENHRFKNMVIVTTTTEC 329
                                                                                                                                                                    330 LRHIRQFGALTAEVGDMTEDSAQALIREVLIKELA--EGLLLQIQKSRCLRNLMKTPLFV 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                505 LTSHEPEEVTKGNGYLOKMVSISDITSTYSSLLRYTCGSSVEATRA---VMKHLAAVYQH 561
                                                                                                                                                                                                                                                388 VITCAIQMGESEFHSHTQTTLFHTFYDLLIQKNKHKHKGVAASDFIR-SLDHCGDLALEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::: ::: | | : : : | | : : | | : : | | :: | LSSLLKHLEEVPQLVKLGLKNWRLTDT----BIRILGAFFGKNPLKNFQQLNLAGN-RV
                         SVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQ---VIGKLIQKNHLSRTCLLIAVRTNR
                                                                                                                                                                                                                  646 AAICAHWFQYPFDPSFDDVAVFKSYMERLSLRNK-----ATAEILKATVSSCGELALKG
                                                                                                                                                                                                                                                                                                                  PFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFYRFLSPAFQEFLAGMRLIEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              562 GCLLGLSIAKRPLWRQESLQSVKN------TTEQEILKAI----NINSFVECGIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1144 PSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVS-----CKKLTEIKFSDSFF--QA
                                                                                                                    ARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNOSLOKIPLFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------FFEHLPNC--ASALDFIKLDFYGG--AMASWE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---DLQNQRLPGGLTDSLGNLKNLTKLIMDNIKM---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LDADDIALL 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ||::::
1053 FDDDDLSVI 1061
                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                818
                      8
                                                       g
                                                                                                                    8 8
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                              8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
```

```
----- CLEVDV 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELS 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1067 AAEQELLLTLPSLESLEVSGTIQSQDQIFPN--LDKFLCLKELSVDLEGNINVFSVIPEE 1124
                                                                                                                                                                                                                                                                                                                                                                                                          42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IOKNHLSRICLLIAVRINRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFM 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LRGLWQICPQAYFSMVSEHLLVLALKTAYQSNT-VAACSPFVLQFLQGRTLTLGALNL-Q 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LKAI - - - - NINSFVECGIHL - - - - - - YQESTSKSALSQEFEAFFQGKSLYINSGNIPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSOVPTIDODYASAFEPMNEWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : |:: |:: || || || || || || LQIQKSRCLRNIMKTPLFVVITCAIQMGESEFHSHTQTTLFHTFYDLLIQKNKHKHKKVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -------FFEHLPNC--ASALDFIKLDFYGG--AMASWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLONMKS-SAEVTPDLQSRGELCELLETTSESNLEDSIAVGPIVPEMAQGEAQWFQEAKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 LAODLKOLYHTPSFLNF-----YPLGEDIDIIFNLKSTFTEPVLWRKDQHHHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  149 VEOLTLNGLLQALQSPCIIEGESGKGKSTLLQRIAMLWGSGKCKALTKFKFVFFLRLS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627 VYFGKNOSLOKIOKTPLFVAAICAHWFQYPFDPSFDDVAVFKSYMERLSLRNK-----A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TABILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYV--SSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PSTKAGPKIVSHLLHLVDN-------KESLENISENDYLKHOPEISLOMOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INEQIRAAYTSASFRHMSLLDISSDLATDHLLGCDLSI---ASKHISKPV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QEPLVLPEVFGNLNSVMCVEGBAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQ---VIGKL
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    238;
                                                                                                                                                                                                                                                                                                                                                         Length 1024;
                                                                                                                                                                                                                                                                                                                                                      Query Match 8.9%; Score 653; DB 9; Length 10:
Best Local Similarity 23.7%; Pred. No. 1.5e-42;
Matches 263; Conservative 197; Mismatches 410; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLKSLKEWNYPLFQDLNGQ----SLFHQTSEGDLDD---
CURRENT APPLICATION NUMBER: US/09/841,739
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 09/697,089
PRIOR PILING DATE: 2000-10-26
PRIOR APPLICATION NUMBER: US 60/161,822
PRIOR FILING DATE: 1999-10-27
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 1024
                                                                                                                                                                                                                                                       TYPE: PRT
CORGANISM: Homo sapiens
US-09-841-739-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         594 YLFD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
```

----------

APPLICANT: Bertin, John TITLE OF INVENTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN FAMILY AND USES THERE

Sequence 2, Application US/09841739 Patent No. US20020034784A1 GENERAL INFORMATION:

US-09-841-739-2

us-09-830-338-1.rapb

```
----CLEVDV 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1007 NDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALELSKASVTKCSISKLELS 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1067 AAEQELLLTLPSLESLEVSGTIQSQDQIPPN--LDKFLCLKELSVDLEGNINVFSVIPBE 1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1125 FPNFHHMEKLLIQISAEYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVS---- 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1180 -CKKLTEIKFSDSFF--QAVPFVA-SLPNFISLKIINLEGQQFPDEETSEKFAYILGSLS 1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----QKLENLKLSINHKITEEGYRNFFQALDNMPNLQELDISRHFTECIKAQATTVKSL 1346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1236 NLEB---LILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEIAKVAISGGF- 1291
                                                                                                                                                                                843
                                                                                                                                                                                                                                                                                                                                                                                                                        439
                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                    932 GKNPLKNFQQLNLAGN-RVSSDGWLAFMGVFENLKQLVFFDFS---TKEFLPDPALVRKL 987
   323 LQIQKSRCLRNLMKTPLFVVITCAIQMGESEFHSHTQTTLFHTFYDLLIQKNKHKHKHKGVA 382
                                                                                                                                                                                                                                                       LRGLWQICPQAYFSMVSEHLLVLALKTAYQSNT-VAACSPFVLQFLQGRTLTLGALNL-Q 901
                                                                                                                                                                                                                                                                                          546 LKAI----NINSFVECGIHL-----YQESTSKSALSQEFEAFFQGKSLYINSGNIPD 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               667 RDFSKLNKQDITYLGKIFSSATSLRLQIKRCAGVAGSLSLVLSTCK-NIYSLMVEASPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383 ASDFIR-SLDHGGDLALEGVFSHKFDFELQDV--SSVNEDVLLTTGLLCKYTAQRFKFKY
                                                                                                                                                                                PSTKAGPKIVSHLLHLVDN-------KESLENISENDDYLKHQPEISLQMQL
                                                                                                                                                                                                                   500 BATRA---VMKHLAAVYQHGCLLGLSIAKRPLWRQESLQSVKN-----TTEQEI
                                                                                                                                                                                                                                                                                                                             902 YFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RFLSPAFQEFLAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYV--SSL
                                       TAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               877 VLEQLTALMLPWGCDVQGSLSSLLKHLEEVPQLVKLGLKNWRLTDT-----EIRILGAPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      962 RNLAEKEDNVKSYMDMQRRASPDLSTGYWKLSPKQYKIP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOCVLRIPRIIRLNMLSWLLDADDIALL 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search completed: March 26, 2005, 09:22:35 Job time : 106 secs
                                                                                                                                                                                                                                                                                                                                                               594 YLFD-
                                                                                                                                               440
                                                                                                                                                                                                                                                       844
                                                                                                                                                                                  799
                                                                                                                                                                                                                                                                                                                                                                                                                                     979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      176
                                                                    유
                                                                                              ઠે
                                                                                                                                  a
                                                                                                                                                                                δ
                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                            염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 원 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                         Publication No. US2003019067941

Sequence 2, Application US/10449315

Publication No. US2003019067941

GENERAL INFORMATION:

APPLICANT: Bertin, John

TITLE OF INVENTION: NOVEL MOLECULES OF THE CARD-RELATED PROTEIN FAMILY AND USES THERE
FILE REPRENCE: 07344-230001

CURRENT APPLICATION NUMBER: US/10/449,315

CURRENT FILING DATE: 2003-05-30

PRIOR APPLICATION NUMBER: US /09/841,739.

PRIOR PILING DATE: 2001-06-29

PRIOR PILING DATE: 2001-06-26

PRIOR FILING DATE: 2001-02-6

PRIOR FILING DATE: 1999-10-27

NUMBER OF SEQ ID NOS: 16

SEQ ID NO 2

LENGTHARE: FastSEQ for Windows Version 4.0

SEQ ID NO 2
                                                                                                        1180 -CKKLTBIKFSDSFF--QAVPFVA-SLPNFISLKILNLEGOOFPDEETSEKFAYILGSLS 1235
                                                                                                                                                                              1236 NLEB---LILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLNDDSVVEIAKVAISGGF- 1291
                                                                                                                                                                                                                                                   -----OKLENLKLSINHKITEEGYRNFFQALDNMPNLQELDISRHFTECIKAQATTVKSL 1346
                                                       819 PC-DLEBIQLVSCCLSANAVKILAQNLHNLVKLSILDL-SENYLEKDGNEALHELIDRMN 876
                                                                                                                                                                                                 GKNPLKNFQQLNLAGN-RVSSDGWLAFMGVFENLKQLVFFDFS---TKEFLPDPALVRKL 987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VEQLTLNGLLQALQSPCI1EGESGKGKST1LQRIAMLWGSGKCKALTKFKFVFFIRLS-- 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IQKNHLSRTCLLIAVRTNRARDIRRYLETILEIKAFPFYNTVCILRKLFSHNMTRLRKFM 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IKENHRPKNMVIVTTTECLRHIRQFGALTARVGDMTEDSAQALIREVLIKELA--EGLL 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | : | : | : | : | TAQDLKOLYHTPSFLNF------YPLGEDIDIIFNLKSTFTEPVLWRKDQHHHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QEPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKI AFLWASGCCPLLNRFQLVFYLSLSST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LNEQLRAAYTSASFRHMSLLDISSDLATDHLLGCDLSI---ASKHISKPV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RPDEGLASIICDQLLEKEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQ---VIGKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLØNMKS-SAEVTPDLØSRGELCELLETTSESNLEDSIAVGPIVPEMAGGEAQWFQEAKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                   FPNFHHMEKLLIQISAEYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVS--
IEDERHITSVTNLKTLSIH----DLQNQRLPGGLTDSLGNLKNLTKLIMDNIKM---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels 238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1024;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
8.9%; Score 653; DB 14;
Best Local Similarity 23.7%; Pred. No. 1.5e-42;
Matches 263; Conservative 197; Mismatches 410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ||:::|
|FLKSLKEWNYPLFQDLNGQ----SLFHQTSEGDLDD-
                                                                                                                                                                                                                                                                                                                                                  988 SQVLSKLTFLQEARLVGWQFDDDDLSVI 1015
                                                                                                                                                                                                                                                                                                                          SOCVLRLPRLIRLNMLSWLLDADDIALL 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
US-10-449-315-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-449-315-2
                                   1125
                                                                                                                                                                                                                                                   1292
                                                                                                                                                                                                                                                                                                                          1347
                                                                      176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                               6 8 6
                                                                                                                                  g
                                                                                                                                                                         ઠ
                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

Š

ઠે

ઠ

ઠે

Š

<sup>T</sup>his Page Blank (uspto)

.

7

•

. .